

ABSTRACT OF THE DISCLOSURE

A process for the production of acetic acid by carbonylating methanol and/or a reactive derivative thereof with carbon monoxide in a carbonylation reactor containing a liquid reaction composition comprising an iridium carbonylation catalyst, methyl iodide co-catalyst, a finite concentration of water, acetic acid, methyl acetate, at least one promoter selected from ruthenium, osmium and rhenium and a stabilising compound selected from the group consisting of alkali metal iodides, alkaline earth metal iodides, metal complexes capable of generating I⁻, salts capable of generating I⁻, and mixtures of two or more thereof wherein the molar ratio of promoter to iridium is greater than 2 : 1, and the molar ratio of stabilising compound to iridium is in the range [greater than 0 to 5] : 1.